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ABSTRACT

Reported is the 1970-71 school year of Vermont's Consulting Teacher Program (Chittenden Central) during which consultants assisted 36 regular and special classroom teachers in individualizing the instruction of 88 handicapped elementary school students. Such program objectives are identified as the retraining on two levels of 40 regular class teachers in special educational services, and establishment of referral, parental involvement, and followup systems. The report documents the number of children served and the target behaviors which were modified; teacher training activities (including use of individualized sequences of instruction for at least one major curriculum area, completion of four courses, attendance at workshop instructional units and leadership training workshops); parent involvement; and dissemination activities. Included are case studies by participating teachers which identify the referral problem, provide student background information, describe the classroom environment, and report instructional objectives, instructional materials, measurement procedures, classroom procedures, and results. (GW)

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EPDA 1970-71 Yearly Report

Chittenden Central School District

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EC 070170

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ABSTRACT

The Chittenden Central School District in rural Vermont is serving as a model district where children eligible for special educational services are served in regular elementary classrooms through the Consulting Teacher Program. During the 1970-71 school year, consulting teachers trained 36 regular and special classroom teachers to individualize instruction. Teachers developed methods to measure target behaviors of referred children to assess the learners' current levels of performance in their classrooms. Teachers designed and implemented procedures based on learning theory so as to strengthen target behaviors. The procedures were evaluated by increased performance of referred children. In addition, preservice and inservice education of educational personnel was conducted. Of a total of 106 children who were referred, 88 qualified for consulting teacher services. In all 88 cases where children received consulting teacher services, a significant measured change in their educational progress was noted.

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Grace Pigeon, Grade 1

Susan Ransom, Grade 2

Ruth Smith, Grade 3

Marie Stocking, Grade 3

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Hiawatha School

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Elizabeth Barrows, Grade 1

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Carol Berry, Grade 4

Malletts Bay School (cont.)

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Kathleen Phillips, Grade 4

David Townsend, Grade 5

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Brenda Bristol, Grade 1

Bonnie Daigneault, Trinity/tutor

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Judith Golub, Grade 2

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Carolyn Hall, Grade 3

Ann Krause, Grade 2

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THE CONSULTING TEACHER PROGRAM VT 2037

The U.S. Office of Education has recognized the need for special eductional services that will keep handicapped learners within the mainstream of education. The Bureau of Educational Personnel Development has funded several projects to develop procedures for serving handicapped learners within regular classrooms. The Consulting Teacher Program of the University of Vermont is one such project. The consulting teacher is an educational specialist who assists elementary teachers to serve handicapped learners, and their parents, within regular classrooms. The consulting teacher helps the classroom teacher develop procedures for individualizing instruction to include measurement of entry level behaviors, specification of instructional objectives, and development and implementation of teaching/learning procedures. The teacher keeps a precise record of pupil progress as he proceeds from entry level to the level specified by the instructional objective. This record of pupil progress allows the consulting teacher and classroom teacher to make a continuous evaluation of teaching/learning procedures. This report is a summary of the first year of operation of the Consulting Teacher Program in the Chittenden Central School District. The Consulting Teacher Program is a continuing project. The first year objectives and a summary of the activities and achievements under each objective are presented below.

EPDA PROGRAM OBJECTIVES - 1970-71 SCHOOL YEAR

The primary objective of the 1970-71 EPDA project was the

realization of social and educational growth as evidenced by the behavioral change of 80 handicapped learners within elementary classrooms. To achieve this primary objective, the following enabling objectives were also to be achieved:

1. the retraining on two levels of 40 regular, elementary class teachers to provide special educational services within their classrooms:
   a. 12 teachers to receive 12 hours of graduate-level training including extensive practica;
   b. 28 teachers to receive training through consulting services and on-the-job experience;
2. the establishment of two consulting teachers in the Chittenden Central School District to work full-time to undertake the primary and enabling objectives specified above;
3. the training of two aides to assist consulting teachers to carry out the above activities;
4. provision of a model for Vermont's local school systems which demonstrates the successful education of handicapped learners within regular classrooms and which establishes for school systems a new professional, the consulting teacher, who consults with and trains regular classroom teachers in the management and education of handicapped learners;
5. establishment at the University of Vermont of an adjunct professor system which allows course credit for on-the-job training and experience in providing special education in regular classrooms and which establishes

the two consulting teachers in the Chittenden Central School District as adjunct professors;

6. establishment of preprofessional laboratory experiences which include training in the management and education of handicapped learners in regular classrooms for 40 elementary teachers-in-training at the University of Vermont; and
7. establishment of referral, parental involvement, and follow-up systems; integration of pupil personnel, special educational, and general instructional services required to provide special educational services within regular elementary classrooms.

EVALUATION OF PROGRAM OBJECTIVES

Services to children.

Consulting teachers in the Chittenden Central School District received 106 referrals from elementary teachers in grades K-6 during the 1970-71 school year. Of these 106 referrals, 88 children were determined to qualify for consulting teacher services. To qualify, a child had to show a significant, measured deficit under the teaching/learning procedures employed at the time of referral. Measured deficits had to interfere with normal educational progress in the areas of language, arithmetic, and/or social behaviors.

The table on the next page is a summary of the number of children receiving services and the target behavior which was to be modified:

BEHAVIOR	NO. OF REFERRALS	NO. OF CHILDREN RECEIVING SERVICES
Language	56	53
Arithmetic	17	15
Social	33	20
TOTAL	106	88

In all 88 cases where handicapped learners received consulting teacher services, a significant, measured change in their educational progress was noted (see primary program objective and objective 2). Case studies indicating referral problem, instructional objectives, teaching/learning procedures, and graphs of data are available from the Consulting Teacher Program (see Appendix 1 for sample case studies).

Teacher training.

Trainees. A total of 36 elementary teachers from the Chittenden Central School District received training in procedures for providing special educational services in their classrooms (see Program objective 1). Fifteen of these teachers enrolled in formal coursework in the University of Vermont's Special Education Program. Ten of the 15 teachers completed 12 hours of coursework, including a six-week summer session. Eight classroom teachers enrolled in and completed workshops certified by the Vermont State Department of Education. The remaining 13 teachers received training through consultation and on-the-job experience.

All formal coursework was offered in the school district by consulting teachers who were appointed adjunct professors of the

Special Education Program (see objectives 2, 4, and 5). To satisfactorily complete the program, each EPDA trainee had to achieve the following instructional objectives:

ANALYSIS OF BEHAVIOR MODULE

The trainee will demonstrate his knowledge of the language and principles of the analysis of behavior through completion of instructional units and accompanying oral examinations by adjunct faculty or their representatives.

The trainee will apply his knowledge of the above to modify the behaviors of at least two different handicapped learners in the trainee's own classroom. Each behavior modification should involve different behaviors, measures, or modification procedures.

e.g., Behaviors: attending, social, and academic.

Measures: sampling, frequency counts, percent correct, and rate.

Procedures: teacher attention, tokens, bar graph change in instructional objectives, sequencing, and home contingencies.

INDIVIDUALIZED INSTRUCTION MODULE

The trainee will demonstrate the use of individualized sequences of instruction for at least one major curriculum area in the trainee's own classroom. The individualized sequence should include measurement of entry level (operant level) skills, terminal instructional objectives, enabling objectives, relevant teaching/learning procedures and materials, and measures of pupil progress. Individualized sequences of instruction must be evaluated with pupils of the trainee's class. A written and/or oral evaluation

of the sequence must be presented to the adjunct faculty or their representatives for approval.

SERVICE/RESEARCH MODULE

The trainee will critically analyze at least five research reports on the analysis of classroom behavior from professional publications through written and/or oral presentations to adjunct faculty or their representatives.

The trainee will conduct a service/research project approved and supervised by adjunct faculty which develops new and/or improved classroom procedures and/or learning materials.

TRAINING/CONSULTATION MODULE

The trainee will demonstrate through reliable behavioral records that he has measured progress, and provided feedback for specified objectives.

Coursework was in the form of self-paced instructional units aimed at enabling trainees to achieve the above objectives. Each instructional unit contained a specific instructional objective, a list of assigned readings, suggested activities which might help the student achieve the instructional objective, and suggested practicum experiences. On the following pages is an example of an instructional unit that all of the teachers enrolled in formal coursework have completed.

Special Education Program University of Vermont

INDIVIDUALIZED INSTRUCTION MODULE

Reading Procedures

Summer 1971

Instructional Objective:

The student and a partner of his choice will work together to develop and administer the reading procedures for word recognition, oral reading accuracy, and comprehension described in the paper by Burdett and Fox (1971). The student and his partner will be required to:

1) develop and administer an entry level test in word recognition, oral reading accuracy and comprehension to at least one learner attending the Summer Development Class.

2) prepare the necessary learning materials for the word recognition, oral reading accuracy, and comprehension procedures.

3) prepare the necessary data sheets and graphs for the word recognition, oral reading accuracy, and comprehension procedures.

4) administer the word recognition, oral reading accuracy, and comprehension procedures to at least one learner from the Summer Development Class for a minimum of 10 sessions. The student's partner must provide reliability measures for the different procedures in minimum of five of the sessions.

5) prepare a graph for each procedure showing the pupil's performance across the 10 sessions.

6) prepare an evaluation and critique of the reading procedures for word recognition, oral reading accuracy, and comprehension.

References:

Burdett, C. S., and Fox, W. L. Reading Procedures. Burlington, Vt.: Special Education Program, College of Education, University of Vermont, 1971.

Egner, A. N., and Fox, W. L. Observation and Measurement of Classroom Behavior. Burlington, Vt.: Special Education Program, College of Education, University of Vermont, 1971.

Activities:

1. Data sheets for word recognition may be obtained from the summer school secretary. Sample word lists, word cards, oral reading accuracy data sheets, comprehension data sheets, comprehension questions etc., may also be obtained from your instructor.

2. There will be several discussions concerning reading procedures and measurement scheduled at various times during the summer program. Exact times and dates will be announced in advance. It is recommended that students plan to attend these discussions.

Each EPDA trainee completed the following sequence of courses:

FALL SEMESTER 1970

Education 296 LABORATORY EXPERIENCE IN EDUCATION: INDIVIDUALIZING INSTRUCTION FOR HANDICAPPED LEARNERS WITHIN REGULAR ELEMENTARY CLASSROOMS.

INSTRUCTIONAL UNITS

Classroom Observation Unit
Instructional Objectives: Unit I
Data Reduction (Graphing) Unit
Instructional Objectives: Unit II
Reliability Unit
Individualized Instruction Sequence Unit I:
Determination of Entry Level
Practice Teacher Utilization Unit
Introduction to Analysis of Behavior
Service Project: SD 296
Respondent Conditioning: Unit I
Research Abstract: Unit II
Operant Principles: Unit II

SPRING SEMESTER 1971

Education 297 LABORATORY EXPERIENCE IN EDUCATION: INDIVIDUALIZING INSTRUCTION FOR HANDICAPPED LEARNERS WITHIN REGULAR ELEMENTARY CLASSROOMS.

INSTRUCTIONAL UNITS

Analysis of Behavior: Unit I

Individualizing Instruction Practicum

Analysis of Behavior: Unit II

Research Abstract: Unit III

Analysis of Behavior: Unit III

Case Study Report Summary

SUMMER SESSION 1971

Education 310 METHODS FOR DERIVING AND ACHIEVING SPECIAL EDUCATION OBJECTIVES.

INSTRUCTIONAL UNITS

Procedures for Individualizing Instruction

Derivation and Specification of Instructional Objectives

Introduction to Reinforcement Principles

Measurement of Entry Level Behaviors

Parent Consultation

The Handicapped Learner (optional)

Special Education in Vermont and the Consulting Teacher Program (optional)

Educational Accountability (optional)

Behaviorism in Education: Philosophy Pro's and Con's (optional)

Classroom Management Techniques (optional)

Evaluation Procedures

Case Study Report Summary

SUMMER SESSION 1971

Education 295 LABORATORY EXPERIENCES IN EDUCATION: ACHIEVING EDUCATIONAL OBJECTIVES FOR HANDICAPPED LEARNERS.

INSTRUCTIONAL UNITS

Classroom Observation and Measurement

Individualized Instruction Practicum

Classroom Management Practicum: Social Reinforcement

Reading Procedures

Workshops. Workshops certified by the Vermont State Department of Education were conducted within the Chittenden Central School District by consulting teachers. Eight teachers enrolled in the workshops and completed the following instructional units:

WORKSHOP INSTRUCTIONAL UNITS

Introduction to the Analysis of Classroom Behavior: The Measurement of Behavior Unit

Introduction to the Analysis of Classroom Behavior: Basic Principles Unit

Introduction to the Analysis of Classroom Behavior: Applications in the Classroom Unit

The Consulting Teacher Program: Introduction Unit

The Consulting Teacher Program: Basic Procedures Unit

Individualizing Instruction Practicum Unit

Individualizing Instruction Practicum Oral Presentation Unit

Consultees. Training for classroom teachers was also conducted through direct consultation and on-the-job experience. Thirteen teachers learned to specify instructional objectives for target behaviors, individualize instruction, measure the daily progress of the referred pupil, and implement and evaluate new teaching/learning procedures.

Aides. Two consulting teacher aides received formal coursework and on-the-job training during the 1970-71 school year (see objective 3). Aides received undergraduate credit from the University of Vermont for completing three hours of Education 197: READINGS AND RESEARCH. Consulting teacher aides received training in classroom observation and measurement, data reduction and graphing, reliability procedures, case study preparation, and in the administration of teaching/learning procedures specified by the consulting teacher. Both aides have been retained by the school district and are currently working as consulting teacher aides.

Practice and prepractice teachers.

Preprofessional laboratory experiences were provided for 30 University elementary education majors of junior and senior standing (see objective 6). Consulting teachers acting in their role as adjunct professors of the College of Education supervised the prepractice and practice teaching practica.

Eighteen senior elementary education majors completed their practice teaching under the supervision of consulting teachers. Each practice teacher was responsible for the conduct of a regular elementary classroom for a consecutive eight-week period. During

this eight-week period, the practice teacher learned to perform all tasks and duties normally expected of an elementary classroom teacher. This included preparation, conduct, measurement and evaluation of all classroom activities, maintaining classroom discipline, supervising play and free-time activities, attending teacher meetings and workshops, holding parent conferences, and all other duties which were assigned by the principal or classroom teacher. Practice teachers also received training in managing the education of handicapped learners in their assigned classrooms. Training consisted of instructional units, seminars, and individual consultation.

Twelve junior elementary education majors completed their prepractice observation and participation practica under the supervision of consulting teachers. Each participating junior-year student demonstrated through reliable measurement that at least one pupil had achieved a specified objective during the 40-hour prepractice teacher practica. Training included seminars and individual consultation.

Leadership training.

A series of Leadership Training Workshops were conducted in the Chittenden Central School District for district administrators, principles, reading specialists, speech therapists, school psychologists, consulting teachers, and other educational specialists (see objective 7). The objectives of the workshops were to develop systems for the integration and coordination of the pupil personnel, special educational, and general instructional services of the district required to provide special educational

services to handicapped learners within regular elementary classrooms. To achieve this end, leadership personnel from the Chittenden Central School District worked with University of Vermont Special Education staff to develop:

1. a referral system which would provide prompt and appropriate service to handicapped learners within regular elementary classrooms; and
2. an information system which would provide up-to-date and reliable data for monitoring the educational progress of handicapped learners within regular elementary classrooms.

As a result of the Leadership Training Workshops, a referral system was developed and implemented throughout the district. The referral system was based upon teacher identification of problem behavior, consultation with building principal or building supervisor, followed by referral to appropriate educational specialists. The referral system was judged adequate but will certainly require revision as the roles of the various educational specialists become better defined.

It was not possible to develop an adequate information system in the time available for the Leadership Training Workshops. However, some requirements for an adequate data system were specified. These include regular, periodic measurement of individual pupil progress; procedures for assuring reliability of data; easy access to data by school administrators, principals, teachers, and district educational specialists; standardized procedures for graphing or otherwise presenting the information; and procedures for providing basic data on individual pupil progress to the

parents of each handicapped learner. Plans for developing such a system have been included in a subsequent proposal and are currently being implemented.

COMMUNITY ACTION

During the 1970-71 school year, consulting teachers obtained parental permission to undertake special educational services for all children served. Permission was obtained through individual conferences with the referring teacher, consulting teacher, parent, and in many cases the principal. Conferences were held at the convenience of the parent (either at home or at school) and were typically conducted by the teacher. Copies of all letters and notes on the meetings were made available to the principal, teacher, home/school coordinator, and any other involved educational specialist, as well as the parents.

In addition, parents were involved in determining procedures to enhance the educational progress of their children by providing systematic positive consequences at home for improvements in school behaviors, conducting tutoring programs at home, and volunteering to conduct tutoring programs for other school children.

However, target dates were not met as initial contacts with parents do not occur until eligibility for services is determined. Eligibility is determined through teachers obtaining precise measurement of deficit behaviors.

Further parent involvement through workshops was requested from the parents of one trainee's classroom. Three meetings were

held with these parents to discuss modern learning principles. As a result, one parent undertook a program to provide systematic consequences for improved school performance of a child enrolled in the trainee's classroom.

Workshops were not requested or initiated in the other trainees' classrooms. Furthermore, there was insufficient time for consulting teachers or trainees to arrange and conduct parent workshops so as to provide the necessary supervision, monitoring, and feedback required for successful implementation of parent projects.

Parents of children served by consulting teachers provided extensive cooperation in attending conferences. Many parents also attended parent teacher meetings and open houses for regularly scheduled reports of their children's progress.

DISSEMINATION

Regular conferences were held with the Curriculum Coordinator of the Chittenden Central School District to provide information on current activities and progress of children served.

Faculty presentations were made in early September to the various schools in the District. The purpose of these presentations was to explain the role of the consulting teacher and to show examples of studies conducted by various classroom teachers.

Building principals received feedback each time a member of the consulting teacher program had contact with members of his staff. Many individual principal/consulting teacher meetings

were held to discuss progress of children served as well as to work out specific problems. The consulting teacher program was asked to make a formal presentation at the District Principal's meeting in February. The purpose of this meeting was to explain and discuss procedures used with classroom teachers. A fourth-grade teacher, Mrs. Carol Berry, presented her work with two specific children, as a way of illustrating typical procedures.

Many Chittenden Central School District personnel attended and participated in two conventions held during the spring of 1971. The purpose of these conventions was to share information and effective procedures used by teachers to provide special education to children within their own classrooms.

At the Second Annual Behavioral Convention held in May for all Vermont teachers, five elementary teachers from the Chittenden Central District presented the results of their work with consulting teachers. At the Miniconvention for Behavioral Educators, eleven trainee teachers presented their teaching/training procedures for enhancing the educational process of children who required special education, to the teachers in the district.

SUMMARY AND CONCLUSIONS

Consulting teachers in the Chittenden Central School District received 106 referrals from elementary teachers in grades K-6 during the 1970-71 school year. Of these 106 referrals, 88 children qualified for consulting teacher services. To qualify, a child had to show a significant measured deficit in language, arithmetic, and/or social behaviors under the teaching/learning procedures employed at the time of referral. In all 88 cases where handicapped learners received consulting teacher services, a significant measured change was noted in their educational progress.

In addition, 36 elementary teachers received training through coursework, workshops or consultation in developing procedures for providing special educational services in their classrooms. Thirty University of Vermont, elementary education majors of junior and senior standing received preprofessional laboratory experiences in the Chittenden Central School District. A referral system was also developed and implemented throughout the district as a result of Leadership Workshops.

Parents of handicapped learners who were receiving consulting teacher services were kept informed of their child's progress throughout the school year. Several teachers participating in the program were invited to make presentations at the Second Annual Behavioral Convention and at a Mini-Convention held within the school district.

In conclusion, it appears that the consulting teacher approach to special education is a viable method of enhancing the educational and social progress of handicapped learners within regular elementary classrooms.

Appendix A: Sample Case Studies

ROSIE$_1$

Referral problem.

Rosie was referred to the consulting teacher by her classroom teacher because she was compulsive and hyperactive. The teacher noted poor work habits such as continually chewing or sucking objects, tapping pencils, feet or hands, or making loud noises. She was a disruptive influence on the rest of the class and had to be watched constantly. In addition, she had very little academic success and no motivation to do her assignments.

Pupil.

Rosie was a 10-year-old girl in the fourth grade of a rural school. Rosie had been under the care of a pediatrician for four years and a child psychologist for two years. As reported by the psychologist, she scored in the normal range on the WISC. The pediatrician had diagnosed Rosie as a hyperactive child and prescribed two daily doses of Retalin, as well as a nightly dose of Tofranil to help her sleep. (From days 18-21 as reported in this study, all medication was withdrawn because the pupil developed a case of hives. From day 22 on, medication was resumed.)

Rosie's academic record revealed that she performed at or near grade level, but was a "very difficult child." In October, 1969, she scored a 2.7 on the Iowa Test of Basic Skills; in May, 1970, on the Gilmore Oral Reading Test (Form B) she scored 4.3 in accuracy and 3.2 in comprehension.

Rosie's parents were cooperative in attending parent conferences. There were two older brothers. Throughout the school year, the parents indicated concern for the progress of the child

and supported school efforts to provide special services.

Description of the classroom.

There were 24 children in Rosie's classroom. The desks were arranged in five rows with 4 to 5 desks in each row. Along one side of the classroom there was a shelf for storage and reference books and a coat rack; along the other side there were windows. The teacher's desk was placed at the front of the room. At the back of the room was a long table and a few chairs where the teacher conducted individual lessons or corrected workbooks.

Instructional objective.

During the daily morning reading period, appropriate study behavior was defined for Rosie as having nothing above the neck (i.e., objects or hands); being face oriented toward the blackboard, seat work or textbook; being in her assigned seat (except to get work materials); not making distracting noises (with her mouth, feet or hands); and completing assignments.

The following objectives were derived: Given reading time between 9:30 and 10:00 every day, the student will not have objects or hands above the neck 60-100% of the time. Given reading time between 9:30 and 10:00 every day, the student will be face oriented toward board, seat work or assignment in text 80-100% of the time. Given reading time between 9:30 and 10:00 every day, the student will be in seat except to get work materials 80-100% of the time. Given reading time between 9:30 and 10:00 every day, the student will complete 80-100% of assignments per day.

Instructional materials.

Rosie's group worked in the Charles Merrill Skill text, Levels 3 and 4 (Macmillan Co., 1968). Over the course of this study, each lesson consisted of a story to be read silently and then orally with vocabulary and comprehension questions.

During the last month of school, reading assignments consisted of individual work on the SRA Reading Laboratory and library books.

Measurement procedures.

The teacher obtained daily measures of each class of behavior (In Seat, Face Oriented, Silent, and Out of Mouth). During the reading period, at 10 three-minute intervals, a "+" was recorded on a data sheet for each behavior if it was observed to occur. The teacher also noted the number of assignments given and the number of assignments completed.

Classroom procedures.

1. No point system. During the reading class, held from 9:00 to 10:15 a.m., the children were divided into two reading sections plus two individual programs. Assignments in the textbooks and accompanying workbooks were listed on the board for each group.

The reading lesson was divided into three parts: oral reading, silent reading, and independent study. While the teacher conducted oral reading for one group, the other group read silently and completed workbook assignments. During the oral reading period, the teacher called on individual pupils to read aloud and to answer questions about the story. During the silent reading

and independent study period, children who had questions were to raise their hands and wait until the teacher could come to their desk.

From the thirteenth day of observation, an individual assignment folder was prepared for Rosie. The assignments for the day were listed. An attempt was made to partition each assignment into segments that would normally take about 15 minutes to complete, although this was not always possible. Rosie was instructed to signal the teacher by raising her hand when each segment was complete. The teacher then went to her desk to check the assignment. For four days (13-16), Rosie earned points if she had been in her seat and quiet during the fifteen-minute work period. Points were later exchanged for art projects, time at the tape recorder, and fun reading during the regularly scheduled study period at the end of the day. In addition, points were exchanged for free time for the entire class to work on art projects for Christmas decorations at the end of the week. Points were discontinued after day 16.

2. Point system. During each of five academic periods, the teacher marked points on a 3' x 5' index card for the occurrence of 'good study behavior' (in-seat, face oriented to work, silent, and objects out of mouth). If the card was filled at the end of the period, the pupil exchanged the points for desirable activities or objects (e.g., 10 minutes listening to a tape recorder, snack, visit with the librarian).

In addition, points were given for completed assignments and good behavior during less structured times, such as recess and lunch. Points could also be saved for activities and privileges

for the whole class once a week (e.g., movie cartoons, extra art period).

The point system was based on token reinforcement with points as tokens which acted as symbols of the event for which they were later exchanged. The main advantage of using a token rather than the actual event is that the event cannot usually occur immediately following the desired behavior. Especially in the school environment, points are helpful in bridging the gap between the appropriate classroom behavior (quietly studying, completing work, and so on) and the desired event (listening to tapes, having a study buddy, or earning free time for classmates).

Three important aspects of a point system were clearly delineated for Rosie:

1. Behavior. The appropriate behavior was specified in observable terms: what behaviors the child will be doing when points are dispensed, as well as what behaviors will not earn points.
2. Delivery. The points were delivered as soon as the appropriate behavior occurred. The more immediate the delivery, the more effective a point system will be. In addition, when points were delivered, the behavior was clearly specified, e.g., 'Good! Twenty points!' or, 'Good studying!' There are two ways in which points were administered:
   a. Directly by the teacher, as when the teacher was near the child (e.g., 'Good! You are in your seat. That's five points!') and the teacher marked the number of points on the child's paper.

b. Indirectly, as when the teacher was at her desk, busy with another child or group, or writing on the blackboard. At these times she may have noticed Rosie was engaging in the desired behavior and quietly stated, 'Rosie, you may mark five points for being quiet.' or 'Good, Rosie, you have raised your hand. Put down one point.

3. Exchange. The back-up reinforcer system covered a broad range of activities, events, and items in order to assure the strength of the point system. Points alone may not achieve the more powerful effect. Back-up reinforcers were in three categories:

a. Immediate exchange: Those activities and items which the child may engage in as soon as the number of points have been accumulated, as indicated by a filled 3' x 5' index card (e.g., erasing the board, going to the library).

b. Short term delay: Those activities, events, and items for which the pupil must wait until a specified time within the school day to exchange points (e.g., recess, lunch, snack).

c. Long term delay: Those activities, events, and items for which the pupil must wait until a specified time within the school week or month (e.g., movies, extra recess).

Results.

Figure 1 shows the teacher's record of Rosie's daily in-

seat behavior during reading period. During the NO POINT SYSTEM condition, percentages of in-seat behavior ranged from 50 to 100%

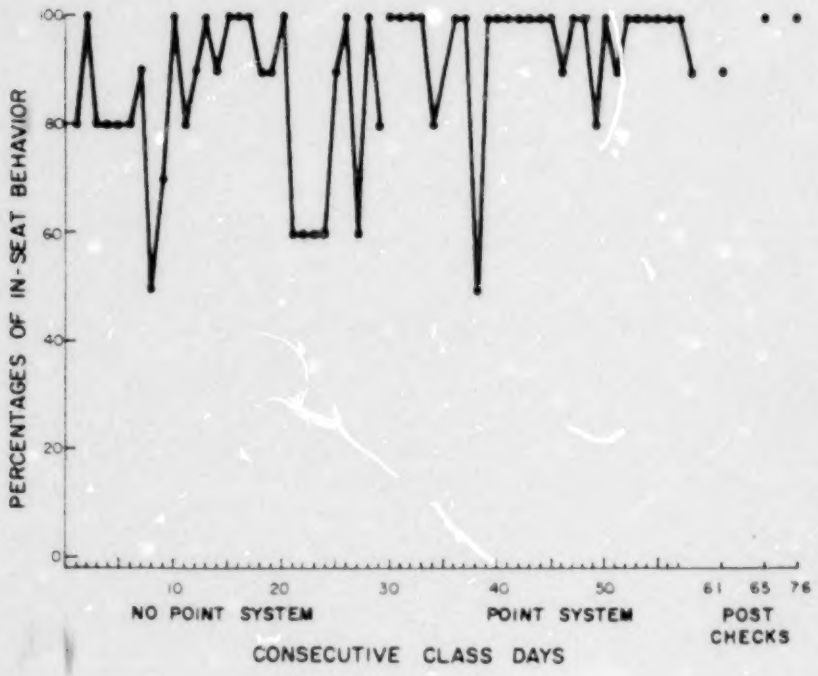

Fig. 1. The teacher's record of the percentage of time that Rosie was in her seat during the 30-minute reading period each day.

with a median of 85%. During the POINT SYSTEM condition, percentages increased to a median of 100%.

Figure 2 shows the teacher's record of Rosie's daily attending behavior during reading period. During the NO POINT SYSTEM condition, percentages were low at a range from 10% to 90% with a median of 40%, while during the POINT SYSTEM condition, percentages increased to a median of 80%.

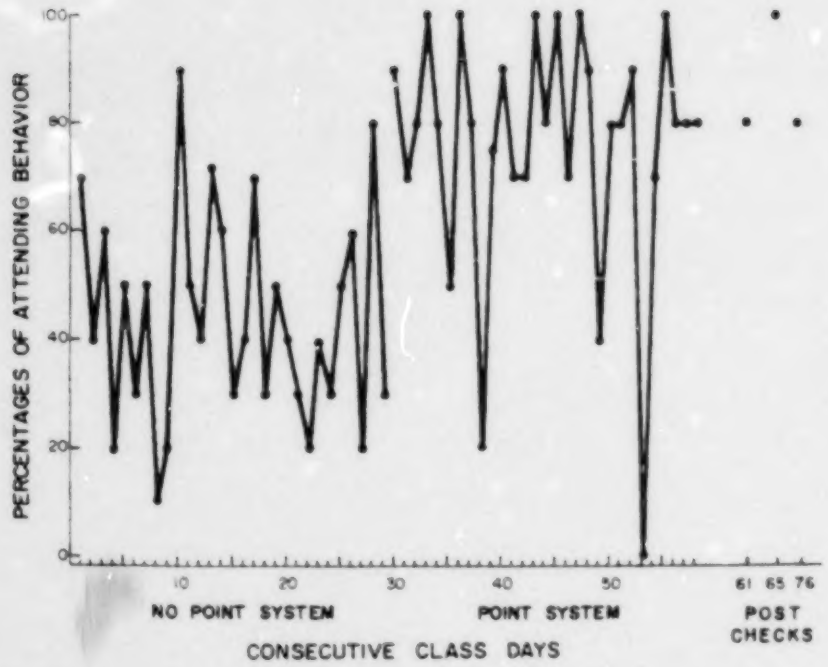

Fig. 2. The teacher's record of the percentage of time that Rosie attended to her work during the 30-minute reading period each day.

Figure 3 shows the teacher's record of Rosie's daily silent behavior. During the NO POINT SYSTEM condition, percentages were low and quite variable at a range from 10% to 100% with a median of 50%. Percentages increased during the POINT SYSTEM condition to a range from 50% to 100% with a median of 80%.

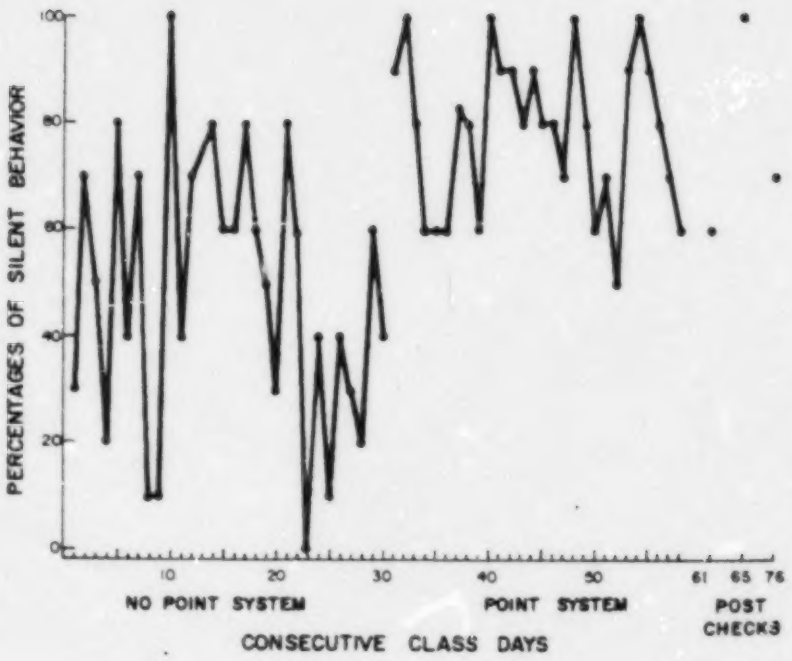

Fig. 3. The teacher's record of the percentage of time that Rosie was silent during a 30-minute reading period each day.

Figure 4 shows the teacher's record of Rosie's behavior of keeping objects out of her mouth. During the NO POINT SYSTEM condition, percentages were low ranging from 10% to 70% with a median of 40%. During the POINT SYSTEM condition, percentages increased to a range of 50% to 100% with a median of 75%.

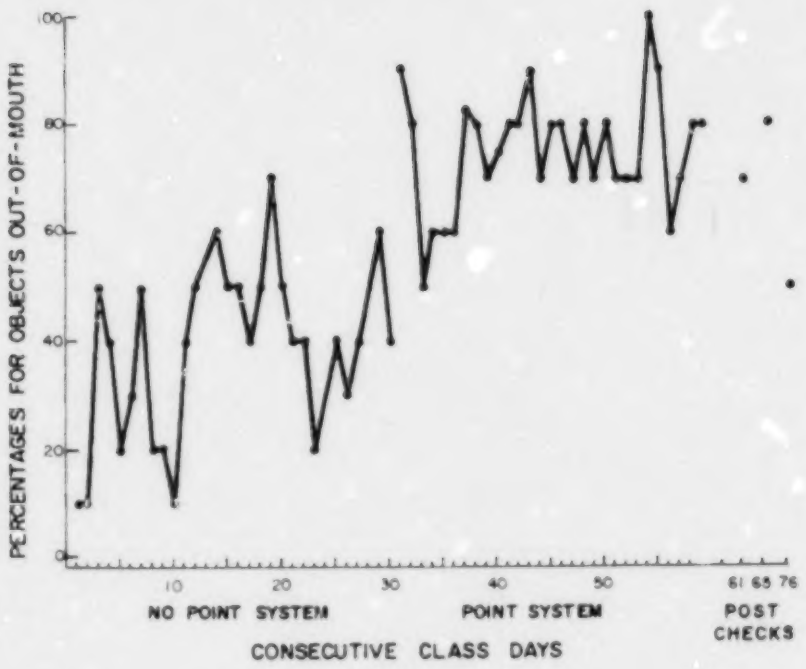

Fig. 4. The teacher's record of the percentage of time that Rosie had no objects in her mouth during a 30-minute reading period each day.

Figure 5 shows the teacher's record of Rosie's daily performance on completing the day's assignments. During the NO POINT SYSTEM condition, Rosie completed an average of 70% of her assignments (ranging from 0% to 100%) while during the POINT SYSTEM condition, she completed an average of 74% (ranging from 22% to 100%).

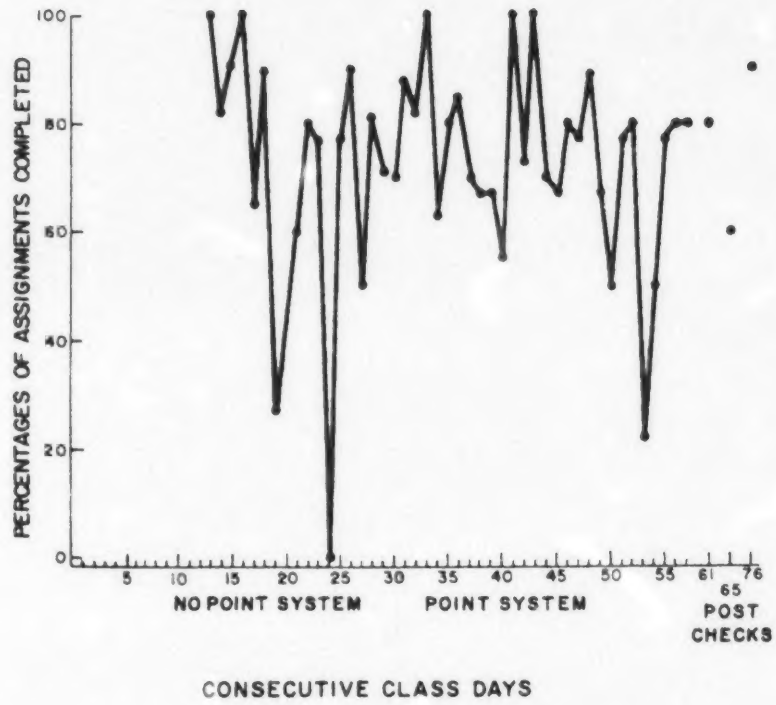

Fig. 5. The teacher's record of Rosie's performance on completing assignments each day.

Discussion.

The systematic token system appeared to be quite effective in increasing appropriate study behavior during reading period for this pupil. When the teacher extended the token system to other academic periods in the day, Rosie was able to maintain an acceptable level of appropriate study behavior. Postchecks indicated that goal levels (80-100%) were maintained throughout the remainder of the school year.

With the introduction of the token system, the teacher and others noted changes in Rosie's physical appearance and attitude. She began to come to school neatly groomed (e.g., perfumed, nail polished, hair combed) as opposed to a sloppy appearance during the early part of the school year.

The rash on her face (caused perhaps by saliva as a result of constantly having objects in her mouth) cleared up during the point system condition. She smiled more and appeared satisfied with her success as a good student. She reported that she was very pleased with the token system and that her classmates were happier about her possibly as a result of the movies and extra recesses which she earned.

Reports from the child psychologist indicated that Rosie's improved appropriate classroom behavior was also noticeable in the monthly therapy sessions held at a city clinic. Rosie was "more settled and able to sit and concentrate." The psychologist also mentioned Rosie's "better groomed personal appearance' and commented that the program has "probably been the most positive thing that's ever happened to her!"

Rosie was promoted to the fifth grade. Between the second and third marking periods, when the point system was instituted, Rosie's marks in 3 out of 5 areas improved by two grade levels (from D to B) and maintained in the other two areas. Conduct and appearance were also markedly improved. Because Rosie still shows deficits in the areas of written and oral communication skills, and appropriate study behavior is a relatively new behavior, the fifth grade teachers who will have her next year have agreed to

work closely with the consulting teacher to provide an individualized instruction program and systematic consequences for her continued educational progress.

[1]This project was conducted in the Westford Elementary School by Mrs. Betty Fay, fourth grade teacher, with the assistance of Mrs. Susan Hasazi, Consulting Teacher in Training, and Mrs. Ann Egner, Consulting Teacher for Westford and Essex School districts.

GREG$_1$

Referral problem

Greg was referred by his teacher because he did not work independently for more than five minutes at his assigned seat without seeking attention or help from the teacher. This was a problem because it disrupted her activities with other children in the class.

Pupil

Greg was an eight-year-old boy who had been diagnosed as an educable retardate. According to the Wechsler Pre-School and Primary Scale of Intelligence which was given March 1, 1968, his IQ was 66 in both verbal and performance. In September, 1969, Greg was given the Metropolitan Readiness Test (Form A), and his total score was 10. He was given the Form B test on May 11, 1970, and he achieved a total score of 58. Greg entered his present class in the middle of the school year, and according to his teacher he had adjusted well to the structure of the classroom. "He readily involved himself with the materials in the room. He established a friendly rapport with the other children in the class and appeared to be a friendly child.

Description of classroom

Greg's class was a level I class for the educable mentally retarded. There were 14 pupils, eight girls and six boys. An aide in the classroom assisted with instructional materials each day. The classroom was divided into four specific areas:

1. There was an academic work area with desks and chairs, which took up approximately one-half of the room. This area was used for whole class instruction or was used by pupils for independent work while other children were being instructed elsewhere in the room. When pupils had finished academic work, fun activities were carried out at their own desks (puzzles, games, drawing, reading, etc.).

2. There was an individual projects area with an art easel, etc.

3. There was a quiet area which was sectioned off from the rest of the room by movable dividers. In this area was a large table with chairs and a chalkboard, and this was used for individual or small group instruction.

4. There was an area at the front of the classroom where there was a semi-circular table with chairs placed before a chalkboard. The teacher used this area most frequently for small group math and reading instruction so that she could at the same time observe the children who were working independently at their desks in the large academic area.

Instructional objective.

During the individual work period from 9:30-10:00 each morning, Greg was to work at his assigned tasks without calling for teacher attention more than once. All written work was to be completed with at least 85% accuracy. The material he was given to work on consisted of reading readiness, math, and handwriting

worksheets designed for his ability level, and he was given specific directions on how to do each sheet.

Measurement procedures

Two different measures of Greg's performance were taken by the teacher during the individual work period.

1. Number of attentions sought and received. The number of times Greg sought the teacher's attention and received it were tallied during the independent work period.

2. Response accuracy. At the end of each work period, the teacher corrected Greg's assignments and entered in her data book the percentage correct of total assigned responses.

Classroom procedures

1. Attention given on demand. Prior to measurement procedures and referral the teacher had attempted to ignore Greg each time he called out for attention or came to her for attention. The ignoring seemed to make matters worse, that is, the undesirable behavior did not lessen and was very disruptive to the children and the teacher.

2. Baseline. Greg was expected to work without talk-outs, getting up from his seat, or engaging in any other distracting behavior. The teacher stated she could give teacher attention to Greg at least once during this period without neglecting her other duties. If Greg completed his assigned work before 10:10, he could get an activity game and bring it back to his desk to work on.

3. Contingency. Beginning with the 13th day of measurement, the teacher went to Greg after every five minutes that he spent working at his academic task. When the teacher gave Greg his instructions for performing his tasks, the teacher also said, "Greg,

don't raise your hand or come to me for help. I am busy with other children and I will come to you when I can." The teacher recorded the time when Greg began his work. When five minutes had passed, if he had not sought the teacher's attention, she would go to him, give him praise for not seeking attention, ask him how he was doing and if he had any questions, and then present him with a token (i.e., Here is a token, Greg, for being such a good worker and not calling out for me. Do you have any questions about your work?") If Greg did seek teacher attention during the five-minute interval, she did not go to him after that interval but waited until Greg had met the criterion for five minutes. The intervals were lengthened to eight minutes, ten minutes, and finally to the point where the teacher went to Greg only once during the independent period.

Results

Figure 1 shows that during baseline the number of talkouts by Greg ranged from 3 to 8, with an average of 5. During contingency, they decreased to a range of 0 to 5, with an average of 0.8.

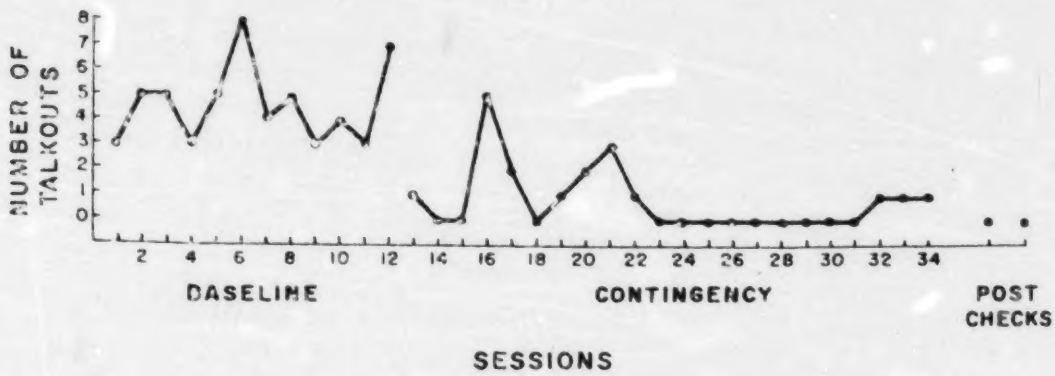

Fig. 1. Teacher's record of the frequency of talkouts made by Greg during baseline and contingency conditions. Post checks were taken after the contingency was no longer in effect.

Figure 2 shows that during baseline Greg's response accuracy ranged from 40 to 100% with an average of 82%. During contingency his accuracy ranged from 63 to 100% with an average of 94%.

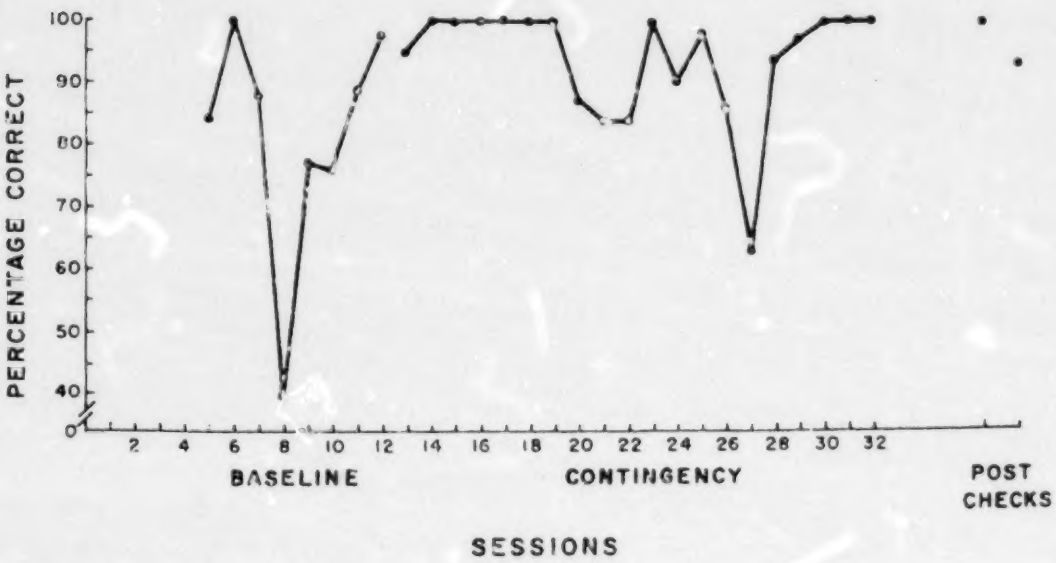

Fig. 2. Teacher's record of the percentage of correct responses during baseline and contingency conditions. Post checks were taken after the contingency was no longer in effect.

Discussion

Greg's academic work improved as the talkouts decreased. Beginning with day 30 of the study, Greg's independent work period was extended to 30 minutes and Greg continued to work quietly at his desk during this time. When he finished his assigned tasks, Greg would find something else to do, such as working on the language master, cleaning the supply area, or playing quietly with a puzzle or game at his desk.

[1]This project was conducted in the Union Memorial School in Colchester, Vt., by Mrs. Ann Mercurio, classroom teacher, with the assistance of Mr. Charles Jarvis, Consulting Teacher in Training, and Mrs. Phyllis Paolucci, Consulting Teacher for the Colchester and Essex Junction school districts.

Jimmy[1]

Referral Problem

Jimmy was referred by his first-grade teacher because he did not pay attention to his work, disrupted other children, and his printing was difficult to read.

Pupil

Jimmy was a seven-year-old first grader in Essex Center, Vermont. In kindergarten he had earned the reputation of the 'problem child'. His first-grade teacher had said that Jimmy was "hyper-active" and suggested to his parents that they see a doctor about drugs to slow him down. Jimmy was given 5 mg. of Dexadrin per day. He had an older sister who was an "excellent student", and a younger brother. His mother was expecting another child. Jimmy's scores on the Peabody Picture Vocaulary Test were in the normal range as indicated by the October 12, 1970 testing.

Description of classroom

Jimmy's class was composed of 23 children who lived in a rural area of Vermont. The classroom itself was divided into three areas: (1) an academic work area with desks and chairs, which took up approximately two-thirds of the classroom; (2) a free-time area for games, which could be played individually after assigned tasks were completed; and (3) a "reading group" area, which consisted of a long table and chairs. During the morning members of the class would create an experience chart which the

teacher would print on the blackboard. The children were required to copy the story and then illustrate some aspect of it. Two or three other worksheets were also provided for this independent work time. During this time, which composed most of the morning, the teacher would work with each of the three reading groups, one at a time. Jimmy was in the lowest group and experienced great difficulty during his independent work time. At this time the children were not allowed to interact with anyone except during their reading group activities.

On Tuesdays from 9:20-9:40 and on Wednesdays from 10:10-10:30 the music teacher conducted the class. Monday and Wednesday from 12:10-12:30 the class went to the gym.

Instructional objective

During the independent work time each morning, Jimmy was to complete his printing assignment, leaving spaces between words with 90-100% of the words spaced correctly.

To enable Jimmy to attain this instructional objective, the following objective was also specified: during the independent work time each morning, Jimmy was to attend to his work at least 80% of the time. Attention was defined as 'in seat, and face oriented toward his assigned task.

Measurement procedures

Two different measures were taken during this independent work time.

1. Correct spacing. After correcting the paper, the teacher placed the number of correct spacings in the upper left hand

corner of the paper. The paper was then given to an aide who in turn counted the correct spacings as well as the total number of possible spacings, and computed the percentage of correct spacings.

2. Attending behavior. Samples of attending behavior were recorded at two-minute intervals during a twenty-minute period following the creation of the experience story. On a specially designed data sheet, the teacher recorded a "+" if Jimmy was attending and a "0" if he was not. On three occasions, a second observer recorded attending behavior in this same manner. An oven timer was used to indicate the time to record. The percent of agreement between the teacher and the second observer averaged 90%, with a range of 80-100% across the three occasions.

Classroom procedures

1. Phase I. Jimmy was required to do his printing assignment without talking to anyone or getting out of his seat.

2. Phase II. This phase was characterized by immediate correction of the printing assignment and the use of a 'spacer'. The "spacer" was designed from an index card and decorated with a star. The teacher explained to Jimmy that this was to help him improve his printing. The teacher and Jimmy went over a previous paper to try out the 'spacer". Jimmy was instructed to use the spacer each time he did a printing assignment. After each word he was to place the spacer on his paper and at the end of the spacer begin the next word.

When the assignment was completed, Jimmy brought his paper to the teacher, and together they corrected the work with the spacer. Each correct spacing was awarded a "C" and a verbal praise. At the child's request, each incorrect spacing was given a check mark (✓).

An index card was sent home to tell Jimmy's parents of his improvement.

Results

Figure 1 indicates the percentage of correct spacing. During Phase I, the percent of correct spacing ranged from 1-43%, with an average of 22%. During Phase II, the percent of correct spacing ranged from 92-100%, with an average of 95%.

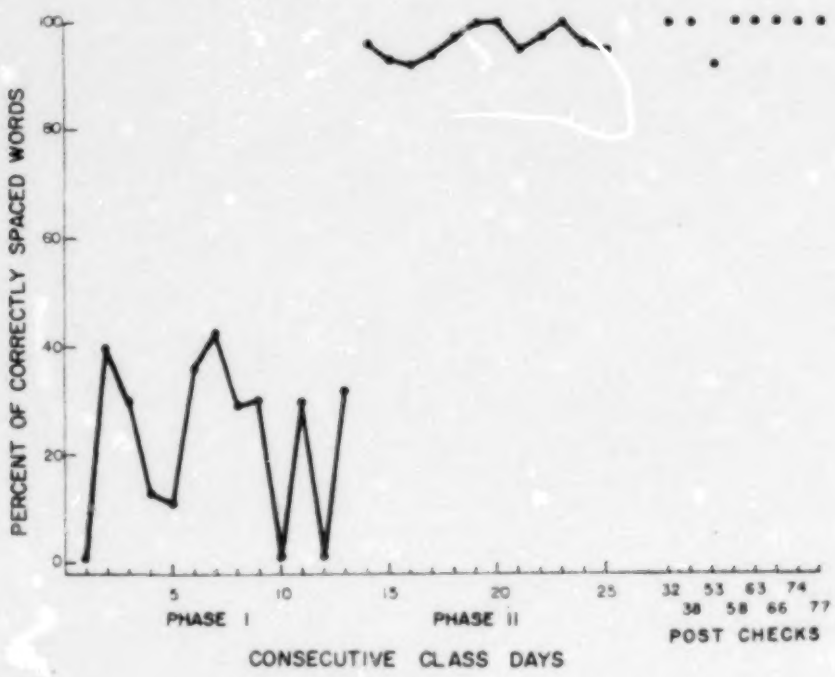

Fig. 1. Teacher's record of the number of words correctly spaced during Phase I and Phase II. Post checks were recorded during gradual removal of the "spacer".

Postchecks indicate that the percentage of correct spacing stayed within the 92-100% range. Postchecks were taken once a week, and during this phase the "spacer aide" was thinned out using the following schedule:

1. Place spacer on paper in correct position, place a dot at right edge, remove spacer, continue printing
2. Estimate spacing, check with spacer
3. Complete printing assignment without use of spacer.

The second postcheck indicates the first thinning procedure. The third postcheck shows the results of step #2 in the thinning procedure, and the fourth week Jimmy completed his assignment without any use of the spacer aide.

The attending data shown in Figure 2 indicates that Jimmy's good behavior is still being maintained. Postchecks on attending were taken on the same day as the postchecks on the printing.

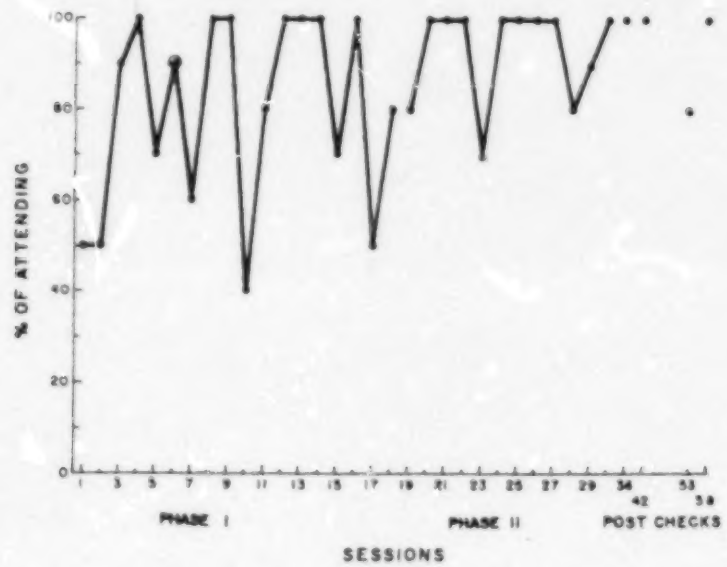

Fig. 2. Teacher's record of the percent of time that Jimmy attended to his assignment during Phase I and Phase II. Post checks were taken on the same day as those postchecks taken for printing.

Discussion

Jimmy attained the teacher's stated instructional objective on the first day of Phase II and continued to do so. His teacher felt his improved performance had generalized throughout the rest of the school day and that he was no longer a behavior problem. The music teacher remarked that he had changed from a "trouble-maker" to a real leader. Jimmy's parents, as well as his teacher, were most happy with his progress. Jimmy's teacher said that she was able to mark his report card, as she did for the rest of the class, for the first time. She was able to do this because Jimmy had improved so much in each area.

[1]This project was conducted in the Essex Elementary School by Mrs. Dorothy Bailey, first grade teacher, with the assistance of Miss Mary McNeil, Consulting Teacher in Training, and Mrs. Ann Egner, Consulting Teacher for Westford and Essex school districts.